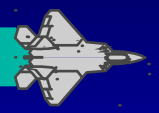
AFSOM Y2K Compliance

Modeling, Simulation and Training
Product Area Directorate

AFSOM SRB/CCB
6-8 Oct 98

AFSOM Y2K Compliance



- **Air Force Suite of Models overview**
  - **Air Warfare Simulation (AWSIM 2)**
  - **AWSIM-to-CTAPS Interface (ACI)**
  - **Graphical Input Aggregate Control (GIAC)**
    - **Used as display and add'l I/O device**
    - **Developed (config. Control) by Los Alamos Nat'l Labs**
    - **Used as GOTS; being tested separately, not included here**

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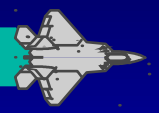
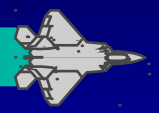


- **Year 2000 compliance**
  - **Model executable & middleware**
  - **Database storage & retrieval**
  - **Operating system**
  - **Areas of concern**

AWSIM 2 Model Overview



- **Developed to be Y2K compliant**
- **Interfaces to CTAPS and Real World C3I**
- **Written in Ada 83 and “C”**
- **Runs on SUN UNIX workstations and servers**

AFSOM Functionality

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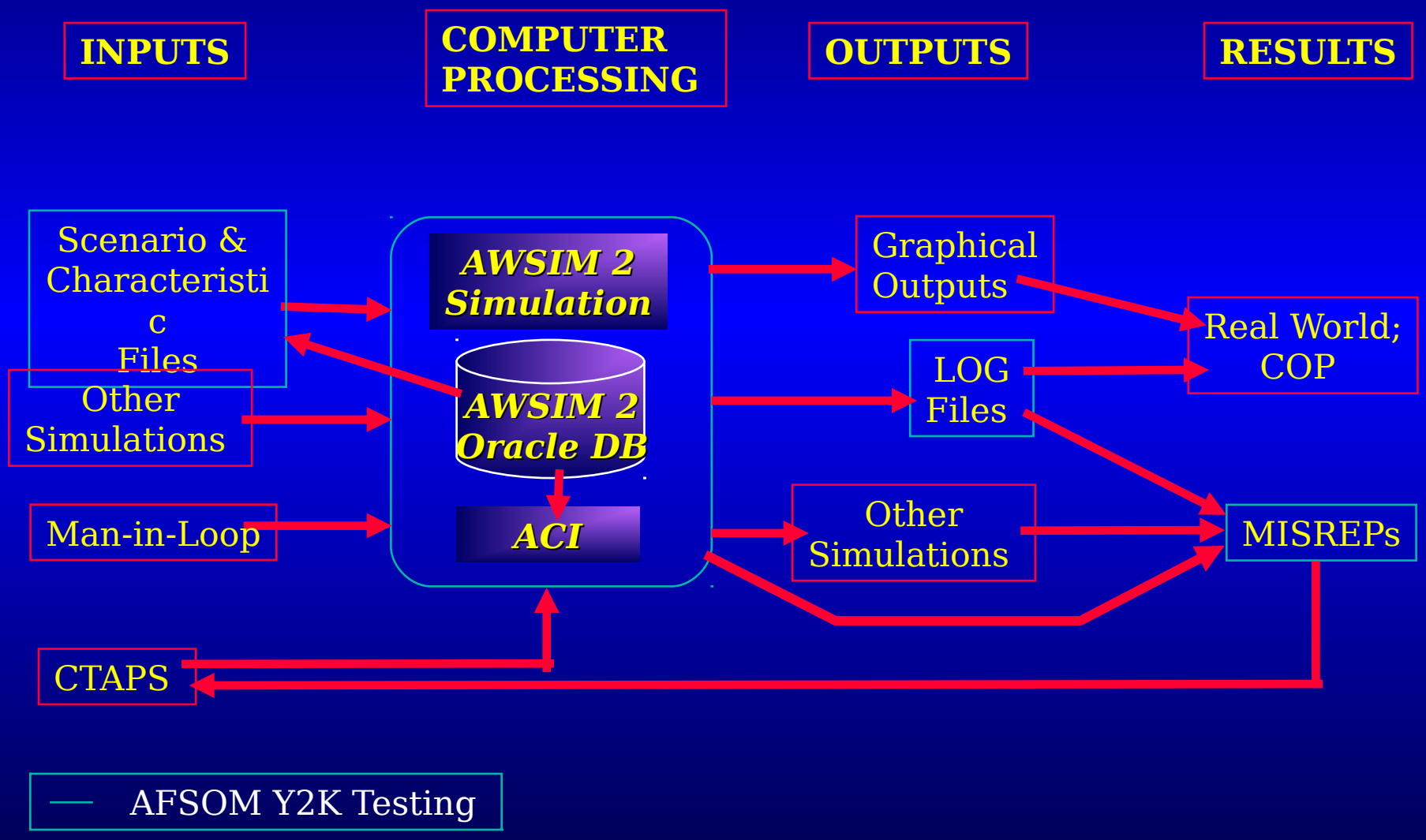

AFSOM Y2K Compliance

- **AWSIM Model (Executable) & Middleware**
  - **DECMessageQ**
- **ACI**
- **Database Storage and Retrieval**
- **Operating System**
- **Platforms**
- **Areas of Concern**

AWSIM & ACI Executable & Middleware
(Including DECMessageQ)

- **Methodology: Used DISA checklist to produce test cases & detailed procedures (prime contractor/developer; test contractor)**
- **AWSIM and ACI executable and middleware not affected by date-time group inputs from the operating system**
- **Migrate to DECMessageQ version 4.0 2Qtr CY1999**
- **Status: Y2K compliant**

Example: AFSOM Model Y2K Test Cases

Test Objective:

- Verify AWSIM 2.0 program is capable of rolling over the following special interest dates to the correct next date. Also verify AWSIM 2.0 program is capable of correctly handling aircraft launch times and aircraft Time On Target (TOT) times before, at, and after the special interest dates indicated in the test cases below.
  - Crosses 1998 12-31 to 1999 01-01
  - Crosses 1999 09-09 to 1999 09-10
  - Crosses 1999 12-31 to 2000 01-01
  - Crosses 2000 01-01 to 2000 01-02
  - Crosses 2000 01-09 to 2000 01-10
  - Crosses 2000 02-28 to 2000 02-29
  - Crosses 2000 02-29 to 2000 03-01
  - Crosses 2000 03-01 to 2000 03-02
  - Crosses 2000 10-09 to 2000 10-10
  - Crosses 2027 12-31 to 2028 01-01

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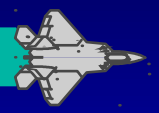
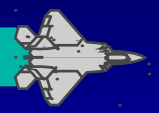


- **For each special interest date:**
  - **Setup a cntrl-f file to perform the following:**
    - **Enter a LAUNCH command with an AT time 5 mins before, Enter a LAUNCH command with an AT time on turnover, Enter a LAUNCH command with an AT time 5 min after, Enter an ATTACK TOT command with a TOT 5 mins before, Enter an ATTACK TOT command with a TOT on turnover, Enter an ATTACK TOT command with a TOT 5 min after.**
  - **Set game time to 90 cycles before test time.**
  - **Read cntrl-f file into the game.**
  - **All flights should go into the Pending Status Board first.**
  - **Verify on the GIAC display that the Date Time Group (DTG) rolls over correctly.**
  - **Verify the Launch command flights with the AT time specified move over to the Mission Status Board and launch at the specified times.**
  - **Verify the Attack command flights with the TOT time specified move over to the Mission Status Board; the launch time will automatically be adjusted to make the TOT.**
  - **Verify the Attack command flights with the TOT time specified arrive on target at the specified time.**

Database Storage and Retrieval

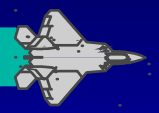
- **Currently using Oracle 7.1.4**
- **Methodology: Migrate to version 8 2Qtr CY1999**
- **Status: Oracle 8.0 is Y2K compliant**

Operating System



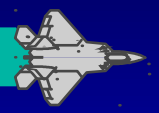
- **SUN Solaris versions 2.5 and 2.6**
- **Methodology: Compliance researched by prime contractor/developer; complete transition from Solaris 2.5 to 2.6 by 2Qtr CY1999**
- **Status: Solaris 2.6 is Y2K compliant**

AFSOM Platforms



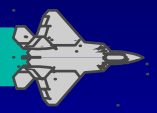
- **Supported by SUNSparc and ULTRASparc workstations and servers**
- **Methodology: All DISA test cases & detailed procedures conducted on representative target platforms**
- **Status: In progress - working with vendors; anticipate compliance to coincide with s/w upgrades**
  - **Coordinating results with AFAMS and User sites**

Areas of Concern



- **Confederations (e.g. ALSP, DIS, & Pt-Pt)**
  - **Status: May have problems if using external interfaces through midnight ‘00; and beyond**
  - **Y2K testing scheduled for AAI/CT 99**
- **AFSOM must run in various configurations**
  - **Many permutations need to be verified**
  - **Requesting confederated testing at scheduled test events**

Summary



- **Incompatibilities will be resolved with software upgrades**
  - **DecMessage Q; Solaris; Oracle**
  - **Final recommendations to be made NLT Dec ‘98**
- **Centers should plan to upgrade directly after CT ‘99**